

## Attachment A - Greenhouse Gas Reduction Targets Adopted by C40 Cities

City	Reporting Year	Baseline Year	Baseline Emissions (metric tonnes CO <sub>2</sub> e)	Percentage Reduction Target	Target Date	Target Description	GHG sources to which the target applies	Target Date Category
Amsterdam	2015	1990	4,134,000	40%	2025		citizens, companies, transport, own organisation	Short term
Austin	2015	2010	14,500,000	90%	2050	net zero by 2050	All residential, commercial, and industrial sources including transportation, landfills, electricity generation, heating, cooling, water treatment, wastewater treatment, all.	Long term
Boston	2015	2005	7,440,000	25%	2020		total community emissions	Short term
Buenos Aires	2015	2008		30%	2030	After a thorough analysis of the different mitigation measures, and after evaluating their emission reduction potential, the City of Buenos Aires set as a global goal to avoid 30% of the GHG emissions projected for 2030, in a business as usual scenario.	The target applies for the energy, transport and waste sector, from both private and public areas. The reduction goal was set as a whole but it's important to take into consideration that as Local Government's emissions are considerably lower than the Community emissions, so is the reduction goal.	Short term
Cape Town	2015	2007	20,550,172	10%	2012	The current target was included in the City's Energy and Climate Action Plan (ECAP) and is currently being reviewed and updated as part of the City's Energy 2040 vision and ECAP update process, to be finalised by end 2015. Updated targets will be provided in the 2016 CDP submission. Current electricity consumption levels city-wide are below 2007 levels.	Primarily applies to electricity generation. Cape Town's electricity is supplied through the national energy utility, Eskom. 95% of Eskom's electricity is coal-generated. The City therefore aimed to decrease its emissions by focusing on decreasing electricity consumption by 10% off a "business-as-usual" baseline by 2012.	Short term
Changwon	2015	2005	7,501,126	30%	2020	The total reduction amount will be reached 3,102,145tCO <sub>2</sub> eq.	Carbon Reduction Ratio by GHG Sources Industry (30.7%), Domestic (14.8%), Commercial (5.8%), Transportation (20.9%), Wastes (1.5%), Agriculture, Livestocks (6.2%), Others (20.2%).	Short term
Chicago	2015	1990	32,300,000	80%	2050		Scope 1 and 2 emissions	Long term
Chicago	2015	1990	32,300,000	25%	2020		Scope 1 and 2 emissions	Short term
Copenhagen	2015	2010	2,240,000	100%	2025		All sources	Short term
Copenhagen	2015	2005	2,541,000	20%	2015		All sources	Short term
Durban	2015	2006	21,413,906	24.50%	2020	The target of 24.5% is articulated in the municipal energy strategy (2008). However, a climate change adaptation and mitigation strategy for the city is currently being developed which will revise these targets to align with the national climate change policy.	CO <sub>2</sub>	Short term
Hong Kong	2015	2005	42,000,000	55%	2020	Hong Kong has set out a carbon intensity reduction target of 50% - 60% by 2020 as compared with 2005 level. If the target is achieved, our carbon intensity level will be reduced to 0.012 - 0.015 kg CO <sub>2</sub> -e/HK dollar GDP in 2020. The GHG emissions level in Hong Kong is also expected to reduce from 42 million tonnes in 2005 to 28 to 34 million tonnes in 2020. Hong Kong has been working with the international community in combating climate change. Alongside other member economies of the Asia-Pacific Economic Co-operation (APEC), Hong Kong adopted the 2011 APEC Leaders' Declaration, and is committed to achieving the APEC target to reduce energy intensity by at least 45% before 2035 (with 2005 as the base year). In May 2015, Hong Kong set a new target on energy intensity reduction by 40% by 2025 using 2005 as the base.	CO <sub>2</sub> - Energy (Electricity Generation, Transport, Other end use of fuel); Waste; Industrial Processes and Product Use; Agriculture, Forestry and Other Land Use	Short term
London	2015	1990	45,000,000	60%	2025	Interim targets are also in place for 2015 and 2020	CO <sub>2</sub>	Short term
Los Angeles	2015	1990	54,100,000	45%	2025	1990 baseline subject to revision to align with forthcoming national GHG accounting protocols.	All	Short term
Madrid	2015	1990	12,653,000	20%	2020		Total	Short term
Madrid	2015	2011	2,367,000	20%	2020		Road transport	Short term
Madrid	2015	2005	11,527,000	35%	2020		Total	Short term
Melbourne	2015	2009	4,934	100%	2020	We have a Zero Net Emissions by 2020 Strategy for the municipality.	Electricity, Gas, Transport, Waste	Short term
Mexico City	2015	2000		50%	2050			Long term
Mexico City	2015	2012	2,010,083	0.01%	2020	Emissions generated by the consumption of electricity and fuel use in malls and service	Commercial	Short term
Mexico City	2015	2012	12,620,635	3.90%	2020	Emissions from motor vehicles on roads and used by the community to be transported; in addition to those generated by vehicles not driven on roads, as the operation of buses within the bus stations, locomotives, aircraft and agricultural machinery and construction	Transport	Short term
Mexico City	2015	2012	4,028,724	6.40%	2020	Emissions from electricity consumption and use of fossil fuel (LPG and natural gas) in different types of housing	Residential	Short term
Moscow	2015	1990	63,443,619	25%	2020	In accordance with overall Russian Federation target (President Law No.752 from 30.09.2013)	Scope 1 GHG emissions within the current boundaries of Moscow	Short term
New York	2015	2006	59,180,000	30%	2030	NEW YORK—Mayor de Blasio announced today that New York City is committing to reducing its greenhouse gas emissions by 80 percent over 2005 levels by 2050, starting with One City, Built to Last: Transforming New York City's Buildings for a Low-Carbon Future – a sweeping plan to retrofit public and private buildings to dramatically reduce the city's contributions to climate change, while spurring major cost savings and creating thousands of new jobs for New Yorkers who most need them. This makes New York the largest city to commit to the 80 percent reduction by 2050, and charts a long-term path for investment in renewable sources of energy and a total transition from fossil fuels. Nearly three quarters of New York City's greenhouse gas emissions come from energy used to heat, cool, and power buildings, making building retrofits a central component of any plan to dramatically reduce emissions. The City is poised to make direct investments to increase the efficiency of its public buildings, including schools and public housing, reducing the government's contribution to climate change and generating operational savings for New York City taxpayers. Every single city-owned building with any significant energy use – approximately 3,000 buildings – will be retrofitted within the next ten years, by 2025, with interim goals along the way.	Buildings and streetlights Fugitive Emissions Transportation	Short term

New York	2015	2006	59,180,000	35%	2025	Global climate change is the challenge of our generation. The stakes are high—for New Yorkers and for the world. In the coming years, New York City will face rising sea levels, increased temperatures and heat waves, and an increasing frequency of the most intense storms. These risks are not remote nor distant. They are here today. The damage caused by Hurricane Sandy in 2012 provided vivid evidence of these risks. Almost two years later, we are still recovering. Globally, climate change is having a devastating impact on people's lives as rising sea levels flood coastlines, droughts disrupt livelihoods, and storms, hurricanes, and other extreme weather events threaten security and economic development. For this reason, New York City is committed to reducing its greenhouse gas (GHG) emissions by 80 percent by 2050—the level the United Nations projects is needed to avoid the most dangerous impacts of climate change—and will chart a long-term course for a total transition away from fossil fuels to renewable sources of energy. We have developed an action plan for our buildings sector to reach a 35% energy reduction by 2025.	Buildings and streetlights Fugitive Emissions Transportation	Short term
Oslo	2015	1991	1,200,000	100%	2050		CO2, CH4, N2O,	Long term
Oslo	2015	1991	1,200,000	50%	2030		CO2, CH4, N2O,	Short term
Paris	2015	2004	25,000,000	25%	2020	To respect the European objectives by 2020 and to decrease overall emissions by 75% in 2050 compared with 2004	all sources all scopes	Short term
Philadelphia	2015	1990	21,059,039	20%	2015		Scopes 1&2.	Short term
Philadelphia	2015	2006	22,837,228	20%	2015		Scopes 1&2	Short term
Portland, OR	2015	1990	8,989,460	80%	2050		Scope 1 (except fugitive emissions), Scope 2 and "waste disposal"	Long term
Portland, OR	2015	1990	8,989,460	40%	2030		Scope 1 (except fugitive emissions), Scope 2 and "waste disposal"	Short term
Quito	2015	2011	5,164,946	30%	2025	5% reduction per year of the projected growth rate of emissions, starting 2019	Transport	Short term
Rio de Janeiro	2015	2005	11,933,280	20%	2020	Measurement of carbon dioxide, methane and nitrous oxide.	Road Transportation, Railway, Residential, Commercial, Public Sector, fugitive emissions and other, Forest and land use, Urban Solid Waste, wastewater.	Short term
Rio de Janeiro	2015	2005	11,933,280	16%	2016	Measurement of carbon dioxide, methane and nitrous oxide.	Road Transportation, Railway, Residential, Commercial, Public Sector, fugitive emissions and other, Forest and land use, Urban Solid Waste, wastewater.	Short term
Roma	2015	2003	3,593,877	15%	2020		Residential	Short term
Roma	2015	2003	4,174,937	23%	2020		Transport	Short term
San Francisco	2015	1990	6,201,949	80%	2050	The City of San Francisco has completed a third party emissions verification during January 2015. The City has met it's year 2012 emission reduction target by reducing it's community-wide emissions approximately 23.3% below 1990 levels.	Residential, Commercial/Industrial, Transportation, Waste.	Long term
San Francisco	2015	1990	6,201,949	40%	2025	The City of San Francisco has completed a third party emissions verification during January 2015. The City has met it's year 2012 emission reduction target by reducing it's community-wide emissions approximately 23.3% below 1990 levels.	Residential, Commercial/Industrial, Transportation, Waste.	Short term
San Francisco	2015	1990	6,201,949	25%	2017	The City of San Francisco has completed a third party emissions verification during January 2015. The City has met it's year 2012 emission reduction target by reducing it's community-wide emissions approximately 23.3% below 1990 levels.	Residential, Commercial/Industrial, Transportation, Waste.	Short term
San Francisco	2015	1990	6,201,949	20%	2012	The City of San Francisco has completed a third party emissions verification during January 2015. The City has met it's year 2012 emission reduction target by reducing it's community-wide emissions approximately 23.3% below 1990 levels.	Residential, Commercial/Industrial, Transportation, Waste.	Short term
Seattle	2015	2008	3,647,000	100%	2050	Our long-term goals are: 58% reduction by 2030 Zero net emissions by 2050.	Road transportation Building energy Waste	Long term
Seoul	2015	2005	49,467,000	25%	2020	One Less Nuclear Power Plant	Transportation, Citizen's cultural place etc.	Short term
Shenzhen	2015	2010	80,000,000	21%	2015	Refer to "Shenzhen Medium-to- Long-term Low-carbon Development plan (2011-2020)", our main methods include upgrading industrial structure, saving energy in the fields of industries, buildings, transportation, developing low-carbon energy, and increasing carbon sink.	major sources of Shenzhen, such as: Industries, Traffice, Building, living etc.	Short term
Singapore	2015	2020	77,200,000	11%	2020	7 to 11% reduction (unconditional) from 2020 Business-as-usual (BAU) emissions; 16% reduction (conditional of global deal) from 2020 Business-as-usual (BAU) emissions	Total GHG (nation-wide)	Short term
Stockholm	2015	1990	3,668,000	100%	2040	Stockholm has a goal that by 2020 our GHG per capita should be down to 2,3 ton 2020 per person.	CO2, CH4, N2O and Energy for heating and cooling, electricity use and Energy for transport	Long term
Stockholm	2015	1990	3,668,000	24%	2020	Stockholm has a goal that by 2020 our GHG per capita should be down to 2,3 ton 2020 per person.	CO2, CH4, N2O and Energy for heating and cooling, electricity use and Energy for transport	Short term
Sydney	2015	2006	52,972	70%	2030	Cities have a critical role in reducing greenhouse gas emissions because although they cover only two per cent of the Earth's land surface, they have more than 50 per cent of the population and cause 75 per cent of the world's emissions. The City is working to reduce carbon emissions by 70 per cent by 2030, one of the most ambitious targets set by any government in Australia. We are: • installing energy efficient street and park lights • rolling out Australia's largest building-mounted solar panel project • carrying out energy efficient retrofits of major buildings • reducing emissions and energy bills through energy efficiency programs • reducing emissions and energy bills through energy efficiency programs  For more on the City's plans visit <a href="http://www.cityofsydney.nsw.gov.au">www.cityofsydney.nsw.gov.au</a>	Scope1-2	Short term

Tokyo	2015	2000	61,800,000	25%	2020	TMG also sets the energy consumption reduction target 20% reduction from the 2000 level by the year 2020. This 20% reduction almost refers to 20 % reduction of GHG. The rest 5% reduction will be achieved by supply side (electricity companies)	All sectors (Industry, Commercial, Residential and Transportation)	Short term
Toronto	2015	1990	27,051,617	80%	2050	6% by 2012 and 30% by 2020 below 1990 levels for the urban area; we also baselined 2004 due to inherent inadequacy of some of the 1990 data.	Applies to all Toronto (community) electricity, natural gas, transportation and solid waste emissions	Long term
Vancouver	2015	2007	2,805,000	33%	2020	See the Greenest City Action Plan for details. Baseline was calculated in 2014 due to change in GWP of CH4 per IPCC AR4 (2007).	All buildings, transportation and solid waste from the community	Short term
Venice	2015	2005	1,418,344	22.90%	2020	SEAP action "free-01 - estimated CO2 reduction by 2020: 1072t" SEAP action "free-02 - estimated CO2 reduction by 2020: 292t" SEAP action "free-06 - estimated CO2 reduction by 2020: 997t" SEAP action "free-07 - estimated CO2 reduction by 2020: 22946t" SEAP action "free-08 - estimated CO2 reduction by 2020: 4347t" SEAP action "free-09 - estimated CO2 reduction by 2020: 97t" SEAP action "free-10 - estimated CO2 reduction by 2020: 772t" SEAP action "free-11 - estimated CO2 reduction by 2020: 132t" SEAP action "free-12 - estimated CO2 reduction by 2020: 166t" SEAP action "free-13 - estimated CO2 reduction by 2020: 477t" SEAP action "free-14 [1/2]- estimated CO2 reduction by 2020: 13702t" SEAP action "free-15 - estimated CO2 reduction by 2020: 3941t" SEAP action "free-16 - estimated CO2 reduction by 2020: 19020t" SEAP action "free-17 - estimated CO2 reduction by 2020: 168t" SEAP action "pure-03 - estimated CO2 reduction by 2020: 38238t" total estimated CO2 reduction by 2020: 106367t"	Total inventory	Short term
Venice	2015	2005	524,145	13.10%	2020	total estimated CO2 reduction by 2020: 106367t"	Residential buildings	Short term
Venice	2015	2005	512,859	29.10%	2020	total estimated CO2 reduction by 2020: 106367t"	Tertiary (non municipal) buildings, equipment/facilities	Short term
Venice	2015	2005	381,340	39.20%	2020	total estimated CO2 reduction by 2020: 106367t"	Private and Commercial Transport	Short term
Warsaw	2015	2007	12,952,984	20%	2020	Climate change is a fact but not everybody is aware of this. Warsaw treats this issue with care. Cities are responsible for 80% of so-called 'anthropogenic' CO2 emission. Climate is one of the most important factors in terms of the functioning of whole ecosystems, economies, and most importantly, of societies. Therefore Warsaw treats sustainable development as a priority in all areas of the City's activities. Only through coordinated and harmonised activities we can achieve the aim of carbon dioxide emissions reduced by 20% by 2020 in accordance with the Covenant of Mayors signed by Warsaw. In the light of the research conducted, carbon dioxide emission per capita in Warsaw stands at 6.29 tons a year. Compared to 1990, it has increased by 15.5%.	all sources of CO2 emissions	Short term
Washington DC	2015	2006	10,101,168	80%	2050		Building energy use (residential, commercial, government), transportation (VMTs), solid waste, transit.	Long term
Washington DC	2015	2006	10,101,168	50%	2030		Building energy use (residential, commercial, government), transportation (VMTs), solid waste, transit.	Short term
Washington DC	2015	2006	10,101,168	20%	2020		Building energy use (residential, commercial, government), transportation (VMTs), solid waste, transit.	Short term
Washington DC	2015	2006	10,101,168	10%	2015		Building energy use (residential, commercial, government), transportation (VMTs), solid waste, transit.	Short term
Yokohama	2015	2005	19,540,000	80%	2050		all of greenhouse gas	Long term
Yokohama	2015	2005	19,540,000	24%	2030		all of greenhouse gas	Short term
Yokohama	2015	2005	19,540,000	16%	2020		all of greenhouse gas	Short term